

CLAIMS:

1. A method of controlling link adaptation and packet scheduling in a High Speed Downlink Packet Access radio system, the method comprising providing feedback information from user equipment to a base station over a control channel;

calculating a quality estimate related to the feedback information by the base station; and

executing link adaptation and packet scheduling based on the calculated quality estimate by the base station.

2. The method of claim 1, further comprising:

informing a link adaptation unit and a packet scheduler unit about the calculated quality estimate and

wherein the step of executing comprises executing the link adaptation and packet scheduling by the link adaptation unit and the packet scheduler unit of the base station.

3. The method of claim 1, wherein the step of calculating comprises calculating the quality estimate related to the feedback information comprising at least one of hybrid automatic repeat request information bits and channel quality indicator information bits.

4. The method of claim 3, wherein the step of calculating the quality estimate comprises calculating estimates of the hybrid automatic repeat request information and channel quality indicator information in order to make faster link adaptation and packet scheduling decisions.

5. The method of claim 4, wherein the step of calculating the hybrid automatic repeat request information estimate comprises averaging received hybrid automatic repeat request information bits.

6. The method of claim 4, wherein the step of calculating estimates of the channel quality indicator estimate comprises:

calculating a set of legal code words corresponding to different channel quality values, and

using a difference between received channel quality indicator information and the set of legal code words to calculate the channel quality indicator estimate.

7. The method of claim 1, wherein the step of providing comprises providing the feedback information over the control channel comprising a High Speed – Dedicated Physical Control Channel.

8. The method of claim 1, wherein the providing step comprises providing the feedback information over the control channel comprising a Dedicated Physical Control Channel.

9. The method of claim 1, further comprising executing the link adaptation and packet scheduling when the calculated quality estimate shows high reliability.

10. The method of claim 1, further comprising:
measuring a second piece of feedback information from associated Dedicated Physical Channel; and

weighting a use of a channel quality indicator compared to the second piece of feedback information from the associated Dedicated Physical Channel.

11. The method of claim 1, further comprising aborting reception of the feedback information, when the calculated quality estimate shows high reliability.

12. A High Speed Downlink Packet Access base station communicating over a control channel with one or more user equipment units, the base station comprising:

receiving means for receiving feedback information from the user equipment;

calculating means for calculating a quality estimate related to the feedback information; and

executing means for executing link adaptation and packet scheduling based on the calculated quality estimate.

13. The High Speed Downlink Packet Access base station of claim 12, wherein the feedback information for calculating the quality estimate comprises at least one of hybrid automatic repeat request information bits and channel quality indicator information bits.

14. The High Speed Downlink Packet Access base station of claim 13, wherein the calculating means are configured to calculate estimates of hybrid automatic repeat request information by averaging the received hybrid automatic repeat request information bits.

15. The High Speed Downlink Packet Access base station of claim 13, wherein the calculating means are configured to calculate estimates of channel quality indicator information by calculating a set of legal code words corresponding to different channel quality values, and using a difference between received channel quality indicator information and the set of legal code words to calculate the channel quality estimate.

16. The High Speed Downlink Packet Access base station of claim 12, wherein the executing means executes the link adaptation and packet scheduling when the calculated quality estimate shows high reliability.

17. The High Speed Downlink Packet Access base station of claim 12, wherein the control channel comprises a High Speed – Dedicated Physical Control Channel channel.

18. The High Speed Downlink Packet Access base station of claim 12, wherein the control channel comprises a Dedicated Physical Control Channel.

19. The High Speed Downlink Packet Access base station of claim 12, further comprising:

measuring means for measuring a second piece of feedback information from associated Dedicated Physical Channel; and

weighting means for weighting a use of a channel quality indicator compared to the second piece of feedback information from the associated Dedicated Physical Channelchannel.

20. The High Speed Downlink Packet Access base station of claim 12, further comprising:

aborting means for aborting the reception of the feedback information when the calculated quality estimate shows high reliability.